

What is claimed is:

1. An exposure apparatus for transferring an image onto a device, the exposure apparatus comprising:

a stage that retains the device; and

5 a chamber assembly that encircles the device and provides a device chamber around the device, the chamber assembly including a fixed section, a moving section that moves relative to the fixed section, and a seal assembly that seals an intersection between the fixed section and the moving section during movement of the moving section.

10 2. The exposure apparatus of claim 1 further comprising a stage mover assembly for moving the stage.

3. The exposure apparatus of claim 2 wherein the moving section moves substantially concurrently with the stage.

15 4. The exposure apparatus of claim 3 wherein the moving section is secured to the stage.

5. The exposure apparatus of claim 3 wherein the stage includes a device table and the chamber assembly includes a table seal that seals the moving section to the device table.

20 6. The exposure apparatus of claim 5 wherein the table seal includes bellows that allow for motion to the device table relative to the moving section.

7. The exposure apparatus of claim 2 wherein a portion of the stage mover assembly is positioned outside the device chamber.

8. The exposure apparatus of claim 2 wherein the stage mover assembly is entirely positioned outside the device chamber.

9. The exposure apparatus of claim 1 wherein the fixed section includes a top wall and four side walls and the moving section includes a bottom wall.

10. The exposure apparatus of claim 9 wherein the top wall, the side walls and the bottom wall cooperate to define a substantially rectangular shaped housing.

5 11. The exposure apparatus of claim 9 wherein the seal assembly seals a bottom edge of the side walls to a top surface of the bottom wall.

12. The exposure apparatus of claim 1 wherein the seal assembly includes a fluid bearing.

10 13. A device manufactured with the exposure apparatus according to claim 1.

14. A wafer on which an image has been formed by the exposure apparatus of claim 1.

15 15. An exposure apparatus for transferring an image onto a device, the exposure apparatus comprising:

a stage that retains the device;

a stage mover assembly that moves the stage; and

a chamber assembly that encircles the device and provides a device chamber around the device, the chamber assembly including a moving section that moves substantially concurrently with the stage.

20 16. The exposure apparatus of claim 15 wherein the moving section is secured to the stage.

17. The exposure apparatus of claim 15 wherein the chamber assembly includes a fixed section and a seal assembly that seals an intersection between the fixed section and the moving section during movement of the moving section.

18. The exposure apparatus of claim 17 wherein the fixed section includes a top wall and four side walls and the moving section includes a bottom wall.

19. The exposure apparatus of claim 18 wherein the top wall, the side walls and the bottom wall cooperate to define a substantially rectangular shaped housing.

20. The exposure apparatus of claim 17 wherein the seal assembly seals a bottom edge of the side walls to a top surface of the bottom wall.

21. The exposure apparatus of claim 15 wherein the stage includes a device table and the chamber assembly includes a table seal that seals the moving section to the device table and allows for motion to the device table relative to the moving section.

22. The exposure apparatus of claim 15 wherein a portion of the stage mover assembly is positioned outside the device chamber.

23. The exposure apparatus of claim 15 wherein the seal assembly includes a fluid bearing.

24. A device manufactured with the exposure apparatus according to claim 15.

25. A wafer on which an image has been formed by the exposure apparatus of claim 15.

26. A method for making a chamber assembly for an exposure apparatus that transfers an image onto a device, the exposure apparatus including a stage that retains the device and a stage mover assembly that moves the stage, the method comprising the steps of:

providing a fixed section;

providing a moving section that moves relative to the fixed section; and  
sealing an intersection between the fixed section and the moving  
section during movement of the moving section with a seal assembly.

5 27. The method of claim 26 further comprising the step of moving the  
moving section substantially concurrently with the stage.

28. The method of claim 26 further comprising the step of securing the  
moving section to the stage.

10 29. The method of claim 26 further comprising the step of sealing a device  
table of the stage to the moving section with a table seal, the table seal allowing for  
motion to the device table relative to the moving section.

30. The method of claim 29 including the step of positioning the moving  
section above the stage mover assembly.

15 31. The method of claim 26 wherein the step of providing the fixed section  
includes providing a top wall and four side walls and the step of providing the moving  
section includes providing a bottom wall.

32. The method of claim 31 wherein the step of sealing includes the step of  
sealing a bottom edge of the side walls to a top surface of the bottom wall.

20 33. A method for making an exposure apparatus including the steps of  
providing a stage and encircling the stage with a chamber assembly made in  
accordance with the method of claim 26.

34. A method of making a wafer utilizing an exposure apparatus made by  
the method of claim 33.

35. A method of making a device including at least the exposure process, wherein the exposure process utilizes the exposure apparatus made by the method of claim 33.

5 36. A method for making a chamber assembly for an exposure apparatus that transfers an image onto a device, the exposure apparatus including a stage that retains the device and a stage mover assembly that moves the stage, the method comprising the steps of:

providing a fixed section;

providing a moving section that moves relative to the fixed section; and

10 securing the moving section to the stage.

37. The method of claim 36 further comprising the step of sealing an intersection between the fixed section and the moving section during movement of the moving section with a seal assembly.

15 38. The method of claim 36 further comprising the step of sealing a device table of the stage to the moving section with a table seal, the table seal allowing for motion to the device table relative to the moving section.

39. The method of claim 36 including the step of positioning the moving section above the stage mover assembly.

20 40. The method of claim 36 wherein the step of providing the fixed section includes providing a top wall and four side walls and the step of providing the moving section includes providing a bottom wall.

41. The method of claim 40 further comprising the step of sealing a bottom edge of the side walls to a top surface of the bottom wall.

42. A method for making an exposure apparatus including the steps of providing a stage and encircling the stage with a chamber assembly made in accordance with the method of claim 36.

43. A method of making a wafer utilizing an exposure apparatus made by  
5 the method of claim 42.

44. A method of making a device including at least the exposure process, wherein the exposure process utilizes the exposure apparatus made by the method of claim 42.

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